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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/609,468	07/01/2003	Manabu Kodate	059695-0102	1060

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EXAMINER	
PIZIALI, JEFFREY J	

ART UNIT	PAPER NUMBER
2629	

DATE MAILED: 08/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/609,468	KODATE ET AL.	
	Examiner	Art Unit	
	Jeff Piziali	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 February 2006 & 31 May 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) *7,9-12,19 and 20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,8,13-18,21 and 22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 February 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Election/Restrictions

2. Applicants' election of Invention I and Species II (i.e. claims 1-6, 8, 13-18, 21, and 22) in the reply filed on 31 May 2006 is acknowledged and appreciated. Because applicants did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

3. Claim 7 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, and claims 9-12, 19, and 20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 31 May 2006.

4. Applicants are reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the

application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Drawings

5. The drawings were received on 10 February 2006. These drawings are acceptable.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

7. Claims 1, 2, 4-6, 13, 14, 16, 17, 21, and 22 are rejected under 35 U.S.C. 102(a) as being anticipated by the Instant Application's Description of Prior Art.

Regarding claim 1, the Instant Application's Description of Prior Art discloses an image display element, comprising: a plurality of data lines to which display signals are applied, the data lines being embedded in a substrate; a plurality of scan lines to which scan signals are applied, the scan lines being embedded in the substrate (see Page 1, Lines 10-25); a first wire [Fig. 6A; 32] having a surface which is exposed, the first wire being electrically connected to one of the scan lines; and a second wire [Fig. 6A; 33] having a surface which is exposed, wherein a distance between the first wire and the second wire is more than or equal to 5μm [wherein the distance measurement is taken from the left-side edge of the first wire to the right-side edge of the second wire, for instance] (see Page 13, Line 8 - Page 14, Line 22).

Regarding claim 2, the Instant Application's Description of Prior Art discloses a potential of the second wire is substantially equal to a potential of a scan line other than the one scan line (see Page 13, Lines 8-21).

Regarding claim 4, this claim is rejected by the reasoning applied in rejecting claim 1; furthermore, the Instant Application's Description of Prior Art discloses the second wire [Fig. 6A; 33] being arranged at a first distance of less than or equal to 10μm of the first wire [Fig. 6A; 32]; and an insulator [Fig. 10; 51] that is arranged to cover the entire exposed surface of at least one of the first and second wires [Fig. 10; 47] (see Page 21, Line 9 - Page 22, Line 14).

Regarding claim 5, this claim is rejected by the reasoning applied in rejecting claim 2.

Regarding claim 6, the Instant Application's Description of Prior Art discloses a counter substrate [Fig. 10; 49] that is disposed opposite to the substrate; wherein the counter substrate is disposed at a second distance from the substrate; and wherein the insulator is a spacer [Fig. 10; 51] that prescribes the second distance (see Page 21, Line 9 - Page 22, Line 14).

Regarding claim 13, this claim is rejected by the reasoning applied in rejecting claim 1; furthermore, the Instant Application's Description of Prior Art discloses a data line driving circuit and a scan line driving circuit (see Page 1, Lines 10-25).

Regarding claim 14, this claim is rejected by the reasoning applied in rejecting claim 2.

Regarding claim 16, this claim is rejected by the reasoning applied in rejecting claims 1, 4, and 13.

Regarding claim 17, this claim is rejected by the reasoning applied in rejecting claim 2.

Regarding claim 21, the Instant Application's Description of Prior Art discloses the first distance from the second wire to the first wire is less than or equal to 5μm [wherein the distance measurement is taken from the left-side edge of the first wire to the right-side edge of the second wire, for instance] (see Page 13, Line 8 - Page 14, Line 22).

Regarding claim 22, this claim is rejected by the reasoning applied in rejecting claim 21.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 3, 8, 15, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Instant Application's Description of Prior Art in view of Kwon (US 6,486,930 B1).

Regarding claim 3, the Instant Application's Description of Prior Art does not expressly disclose any particular display element arrangement of pixel electrodes and switching devices. However, Kwon does disclose a first pixel electrode [Fig. 5A; 71c] and a second pixel electrode [Fig. 5A; 73c] that are supplied with display signals from one of the data lines [Fig. 5A; D1]; a first switching device [Fig. 5A; 71b] that controls a supply of the display signal in the one data line, wherein the first switching device is electrically connected between the one data line and the first pixel electrode and that has a gate electrode; a second switching device [Fig. 5A; 71a] that is electrically connected between the gate electrode of the first switching device and one scan line [Fig. 5A; G1]; and a third switching device [Fig. 5A; 73] that is connected to the one data line and that controls a supply of the display signal to the second pixel electrode (see Column 3, Line 59 - Column 4, Line 36).

The Instant Application's Description of Prior Art and Kwon are analogous art, because they are both from the shared field of active matrix liquid crystal display devices. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use the substrate fabrication techniques of the Instant Application's Description of Prior Art to manufacture Kwon's multiplexed image structure, so as to reduce the necessary number of data lines.

Regarding claim 8, this claim is rejected by the reasoning applied in rejecting claim 3.

Regarding claim 15, this claim is rejected by the reasoning applied in rejecting claim 3; furthermore, Kwon discloses a first pixel electrode [Fig. 5A; 73c] and a second pixel electrode

[Fig. 5A; 71c] that are supplied with a display signal from a same data line [Fig. 5A; D1]; a first switching device [Fig. 5A; 73] that controls the supply of the display signal from the data line to the first pixel electrode, and that is driven based on a scan signal supplied from a first scan line [Fig. 5A; G1]; a second switching device [Fig. 5A; 71b] that controls a supply of the display signal from the data line to the second pixel electrode, and that is driven based on a scan signal supplied from a second scan line [Fig. 5A; G2] subsequent to the first scan line; and a third switching device [Fig. 5A; 71a] that is driven based on the scan signal supplied from the first scan line, and that controls ON and OFF of the second switching device (see Column 3, Line 59 - Column 4, Line 36).

Regarding claim 18, this claim is rejected by the reasoning applied in rejecting claims 3 and 15.

Response to Arguments

10. Applicants' arguments filed 10 February 2006 have been fully considered but they are not persuasive. The applicants contend the cited *Instant Application's Description of Prior Art* neglects teaching a distance between a first wire and a second wire that is more than or equal to 5μm (see Pages 11-12 of the 'Amendment and Reply Under 37 CFR 1.111' filed 10 February 2006). However, the examiner must respectfully disagree.

In response to applicants' argument that the references fail to show certain features of applicants' invention, it is noted that the features upon which applicant relies (i.e., the **"narrowest distance"** between the first and second wires being more than or equal to 5μm) are

not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The applicants allege an artisan would presume the claimed "a distance" to mean the "the narrowest distance." However, the examiner respectfully disagrees. An artisan would be just as likely, if not more so, to take "a distance" as to mean "the widest distance" between the wires (or any other distance in between the *widest* and *narrowest*, for that matter).

Furthermore, the *Instant Application's Description of Prior Art* clearly does teach a "narrowest distance" between a first wire [Fig. 6A; 32] and a second wire [Fig. 6A; 33] being less than 5μm (see Page 13, Line 8 - Page 14, Line 22). As such, one having ordinary skill in the art would understand such a teaching as meaning that the narrowest distance between the two wires is, for instance, 49999.9×10^{-10}m. Taking the width of a single atom (substantially the shortest conceivable length of either surface wire) to be at least 1.06×10^{-10}m, and adding it to this narrowest distance will result in a sum total wire distance of "more than or equal to 5μm" [wherein the distance measurement is taken from the left-side edge of the first wire to the right-side edge of the second wire, for instance], as instantly claimed.

The applicants also contend the *Instant Application's Description of Prior Art* neglects teaching an insulator arranged to cover the entire exposed surface of at least one of the first and second wires (see Page 12 of the 'Amendment and Reply Under 37 CFR 1.111' filed 10 February 2006). However, the examiner respectfully disagrees. The *Instant Application's Description of Prior Art* clearly discloses one inventive embodiment with an ion layer [Figs. 6B & 6C; 34] covering the entire exposed surface of a wire [Figs. 6B & 6C; 32]. Another inventive

embodiment shows a liquid crystal layer [Figs. 10 & 11; 50] covering the entire exposed surface of a wire [Figs. 10 & 11; 47]. Still further, counter substrate [Figs. 10 & 11; 49] is seen as covering the entire exposed surface of the wire [Figs. 10 & 11; 47]. It is additionally noted that the counter substrate [Figs. 10 & 11; 49], liquid crystal layer [Figs. 10 & 11; 50], and the spacer [Figs. 10 & 11; 51] would reasonably be construed in combination by as artisan as constituting a layer covering the wire [Figs. 10 & 11; 47]. Lastly, one skilled in the art would see the spacer [Figs. 10 & 11; 51] as covering (i.e., to place over, so as to protect from the common electrode [Figs. 10 & 11; 48]) the entire exposed surface of wire [Figs. 10 & 11; 47] (see Page 21, Line 9 - Page 22, Line 14 of the instant specification).

By such reasoning, rejection of the claims is deemed necessary, proper, and thereby maintained at this time.

Conclusion

11. Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Piziali whose telephone number is (571) 272-7678. The examiner can normally be reached on Monday - Friday (6:30AM - 3PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (571) 272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jeff Piziali
16 August 2006

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